AMENDMENTS

In the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A high-resistance silicon wafer having resistivity of 100 Ωcm or more, wherein an oxygen precipitate ~~(BMD)~~ having a size of 0.2 μm or more is formed so as to have density of 1 x 10^4/cm^2 in the wafer, an oxygen concentration in the wafer as measured in accordance with ASTM F-121, 1979 is 12 x 10^{17} atoms/cm^3 ~~(ASTM F-121, 1979)~~ or less, and a carbon concentration is in a range of 0.5 x 10^{16} atoms/cm^3 ~~or more~~ to 1.0 x 10^{17} atoms/cm^3.

2. (Currently Amended) The high-resistance silicon wafer according to claim 1, wherein a density of a ~~LPD (Light Point Defect)~~ light point defect having a size of 0.12 μm or more and observed on a surface of the wafer is ~~controlled so as to be~~ 0.2/cm^2 or less.

3. (Currently Amended) A high-resistance silicon wafer having resistivity of 100 Ωcm or more, wherein a density of a grown-in defect detected by seco etching is 1 x 10^3/cm^{-3} or less, an oxygen precipitate ~~(BMD)~~ having a size of 0.2 μm or more is formed so as to have density of 1 x 10^4/cm^2 or more in the wafer, [[and]] an oxygen concentration in the wafer as measured in accordance with ASTM F-121, 1979 is 12 x 10^{17} atoms/cm^3 ~~(ASTM F-121, 1979)~~ or less, and a carbon concentration in the wafer is in a range of 0.5 x 10^{16} atoms/cm^3 to 1.0 x 10^{17} atoms/cm^3.

4. (Canceled)

5. (Currently Amended) The high-resistance silicon wafer according to claim 1 or 3, wherein a ~~DZ (Denuded Zone)~~ denuded zone layer is formed at least 5 μm or more in depth from a surface of the wafer.

6. (Currently Amended) The high-resistance silicon wafer according to claim 1 or 3, wherein ~~value of~~ the oxygen concentration ~~(ASTM F-121, 1979)~~ of the wafer as measured in accordance with ASTM F-121, 1979 is limited in ranges of 12 x 10^{17} atoms/cm^3 or less, 7 x 10^{17} atoms/cm^3 or less, and 5.8 x 10^{17} atoms/cm^3 or less when the resistivity of the wafer is not less than 100 Ωcm and less than 300 Ωcm, not less than 300 Ωcm and less than 2000 Ωcm, and not

less than 2000 Ωcm, respectively.

7. (Currently Amended) A ~~manufacturing~~ method of manufacturing a high-resistance silicon wafer, ~~characterized in that~~ comprising:

providing a primary silicon wafer in which resistivity is 100 Ωcm or more, oxygen concentration as measured in accordance with ASTM F-121, 1979 is 12 x 10^{17} atoms/cm^3 ~~(ASTM F-121, 1979)~~ or more, and a carbon concentration [[is]] in a range of 0.5 x 10^{16} atoms/cm^3 to 1.0 x 10^{17} atoms/cm^3 ~~or more~~ is used, and

producing the high-resistance silicon wafer in which a remaining oxygen concentration in the wafer is controlled to be 12 x 10^{17} atoms/cm^3 as measured in accordance with ASTM F-121, 1979 ~~(ASTM F-121, 1979)~~ or less by performing a heat treatment for forming an oxygen precipitate nucleus and a heat treatment for growing the oxygen precipitate on the primary silicon wafer.

8. (Currently Amended) A ~~manufacturing~~ method of manufacturing a high-resistance silicon wafer, ~~characterized in that~~ comprising:

providing a primary silicon wafer in which resistivity is 100 Ωcm or more, an oxygen concentration as measured in accordance with ASTM F-121, 1979 is 14 x 10^{17} atoms/cm^3 ~~(ASTM F-121, 1979)~~ or more, a carbon concentration in the wafer is controlled to be in a range of 0.5 x 10^{16} atoms/cm^3 to 1.0 x 10^{17} atoms/cm^3, and a density of a grown-in defect detected by seco etching is 1 x $10^3/cm^{-3}$ is used, a remaining oxygen concentration in the wafer as measured in accordance with ASTM F-121, 1979 is controlled to be 12 x 10^{17} atoms/cm^3 ~~(ASTM F-121, 1979)~~ or less by performing a heat treatment for forming an oxygen precipitate nucleus and a heat treatment for growing the oxygen precipitate on the primary silicon wafer.

9. (Currently Amended) The ~~manufacturing~~ method ~~of the high-resistance silicon wafer~~ according to claim 7 or 8, wherein the heat treatment for forming the oxygen precipitate nucleus is a low-temperature heat treatment performed at 500 to 900°C for 5 hours or more.

10. (Currently Amended) The ~~manufacturing~~ method ~~of the high-resistance silicon~~

~~wafer~~ according to claim 9, wherein the conditions of the low-temperature heat treatment is at 700 to 900°C for 5 hours or more.

11. (Currently Amended) The ~~manufacturing~~ method ~~of the high-resistance silicon wafer~~ according to claim 7 or 8, wherein the heat treatment for growing the oxygen precipitate is a high-temperature heat treatment performed at 950 to 1050°C for 10 hours or more.

12. (Currently Amended) The ~~manufacturing~~ method ~~of the high-resistance silicon wafer~~ according to claim 7 or 8, ~~characterized in that~~ further comprising performing an oxygen outward diffusion heat treatment is performed on the wafer at 1100 to 1250°C for 1 to 5 hours before the heat treatment for forming the oxygen precipitate nucleus.

13. (Currently Amended) The ~~manufacturing~~ method ~~of the high-resistance silicon wafer~~ according to claim 12, ~~characterized in that~~ further comprising performing the oxygen outward diffusion heat treatment ~~is performed~~ in a gas atmosphere containing nitrogen gas.

14. (Currently Amended) The ~~manufacturing~~ method ~~of the high-resistance silicon wafer~~ according to claim 12, ~~characterized in that~~ wherein the oxygen outward diffusion heat treatment is performed in an atmosphere of a hydrogen gas, argon gas or mixed gas ~~of these~~ thereof.

15. (Currently Amended) The ~~manufacturing~~ method ~~of the high-resistance silicon wafer~~ according to claim 7 or 8, ~~characterized in that~~ further comprising performing a rapid thermal annealing process ~~is performed~~ on the wafer before the heat treatment for forming the oxygen precipitate nucleus.

16. (Currently Amended) The ~~manufacturing~~ method ~~of the high-resistance silicon wafer~~ according to claim 15, wherein the ~~conditions of the~~ rapid thermal annealing process is carried out at 1150 to 1300°C for 1 to 60 seconds in an atmosphere containing nitrogen.

17. (Canceled)